## REMARKS

***Introductory Remarks***

Claim 18 has been amended as shown in the Listing of Claims section. Accordingly, claim 18 is currently pending in the application and is the only independent claim.

Applicant respectfully submits that the above amendments do not add new matter to the application and are fully supported by the specification. Claim 1 was amended to correct a typographical error.

In view of the above amendments and the following Remarks, Applicants respectfully request reconsideration and timely withdrawal of the pending objections and rejections for the reasons discussed below.

***Rejections Under 35 U.S.C. §103***

Claim 18 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Klett (CARBON), in view of Harnett, Kolling, Murdie, and Nagle. Applicants respectfully traverse this rejection for at least the following reasons.

In order to establish a *prima facie* case of obviousness the "references (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure." (MPEP 2142). The Examiner has not considered every element of claim 18, and in particular has not recognized the criticality of starting with a high melting point petroleum pitch and deriving a mesophase carbon particulate from this high melting point isotropic petroleum pitch for use in producing a carbon foam.

Claim 18 is directed to a porous pitch-base foam manufactured by a process in which a petroleum pitch having a softening point above about 300°C is selected and used to derive a mesophase carbon particulate. The mesophase carbon particulate derived from the high softening point petroleum pitch is used to form carbon foam.

The utilization of a petroleum pitch having a melting point above 300°C to derive the mesophase material is not a trivial feature of the invention. The Examiner is directed to page 7, lines 2-8 of the specification where it clearly and unambiguously states, "[i]t is critical to the successful practice of the present invention that the mesophase carbon starting material be derived from an isotropic petroleum or coal tar pitch that exhibits the previously specified elevated softening point." None of the cited references have recognized this feature.

There are problems in forming carbon foam with any type of pitch. The specification clearly discusses several examples of these problems.

> Apparently because of the relatively low and broad softening points of isotropic coal tar and petroleum pitch materials (generally in the range of from about 240°C. to about 280°C), the application of foaming processes such as those described in aforementioned U.S. patent application Ser. No. 09/453,729 is very difficult and attempts to foam them in this fashion have generally failed. Such failure is primarily due to the fact that, although the mesophase materials derived from such "low softening point" petroleum and coal tar pitches. as just described, can be "foamed" using processes similar to those described in connection with the production of coal-based carbon foams, they tend to "slump" or collapse upon themselves during the foaming process resulting in a relatively dense, if somewhat porous, mass, unless extremely tight process controls are applied. Even when such care is taken, the variability of such petroleum and coal tar pitches often results in failure of the foaming operation.

(Specification, Page 4, Lines 1-14.)

Clearly, the specification specifically points out the importance of 1) selecting an petroleum pitch with a softening point above about 300°C, 2) deriving the mesophase carbon material from the high softening point petroleum pitch, and 3) using the derived mesophase carbon material to form carbon foam. Claim 18 specifically embodies these features.

The Examiner asserts that the Conoco B mesophase material disclosed in Klett (CARBON) has a softening point of 355°C. While this may be true, this is the softening point of the mesophase material and not the petroleum pitch which is used to derive a mesophase material. None of the cited references disclose "selecting a mesophase carbon powder derived from a petroleum pitch exhibiting a softening point of above about 300°C" as required by claim 18. Accordingly, the combination of Klett (CARBON), in view of Harnett, Kolling, Murdie, and Nagle does provide "selecting a mesophase carbon powder derived from a petroleum pitch exhibiting a softening point of above about 300°C" as required by claim 18.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claim 18.

***Double Patenting***

Claim 18 stands rejected under the judicially created doctrine of obviousness type double patenting over claims 3, 83 and 22 of U.S. Patent No. 6,656,239 issued to Rogers. The present application and U.S. Patent No. 6.656,239 are currently commonly owned.

Statement of Common Ownership

Application 10/810.840 and U.S. Patent No. 6,656,239 were, at the time the invention of Application 10/810.840 was made, owned by Touchstone Research Laboratory.

Applicants respectfully request that the double patenting rejections be held in abeyance until claims in the present application are otherwise in condition for allowance. At that time, if appropriate, a terminal disclaimer will be submitted.

***Extension of Time***

A Petition for a three (3)-month extension of time under 37 C.F.R. §1.136(a) is filed herewith extending the period for response through June 14, 2006. It is not believed that any further extensions of time are required other than those in the accompanying Petition. If extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned for under 37 C.F.R. §1.136(a). Applicants believe that no further fees for net addition of claims are required at this time. Any fees required for extensions of time and any fees for the net addition of claims are hereby authorized to be charged to Deposit Account No. 503310.

***Conclusion***

Applicant believes that a full and complete response has been made to the pending Office Action and respectfully submits that all of the stated objections and grounds for rejection have been overcome or rendered moot. Should the Examiner feel that there are any issues outstanding

after consideration of this Reply, the Examiner is invited to contact the Applicant's undersigned representative at the number below to expedite prosecution. Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,

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